

COMPENSATOR SPROCKET KIT



PN 630B-67 Compensator Kit



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FEATURES

The BAKER 630B-67 Compensator Kit features improved function, quieter operation, and extended durability over the stock Factory configuration. These improvements were achieved by merging the tried-n-true pre-2007 cam lobe geometry (figure 1) with a patent pending circular oil trowel (figure 2) that channel primary lubricant into the cam lobe region.

FITMENT

- 2006-Later Dyna
- 2007-Later Softail/ Touring

PARTS, TOOLS, and REFERENCE MATERIALS REQUIRED

To complete the installation of the BAKER Compensator Kit the following is required:

- A new primary cover gasket
- 9/16-12 bottoming tap or thread chaser to clean the sprocket shaft female threads
- Early Factory compensators utilized a rotor with an integral compensator spring cup. Bikes equipped with this early style rotor must be retrofitted with a PN 30041-08A late style rotor.
- 2006 Dyna must also retrofit the stator with PN 30017-07.
- 46-40 fl-oz of primary lubricant; see details on page 5.
- Primary Drive locking tool HD-48219 (Touring models) HD-47977 (Softail/Dyna)
- These instructions make references to the Factory service manual. A service manual for your year and model motorcycle is required.

HIGHLY RECOMMENDED ADDITIONAL PART

With the primary drive disassembled to install the new 630B-67 compensator, BAKER highly recommends that the automatic chain tensioner be replaced with a 177-67K Attitude Adjuster (figure 3). Extensive testing and durability miles have proven that the 177-67K Adjuster puts less bending moment loading on the motor sprocket shaft and the transmission mainshaft thereby extending the life of the drivetrain components.

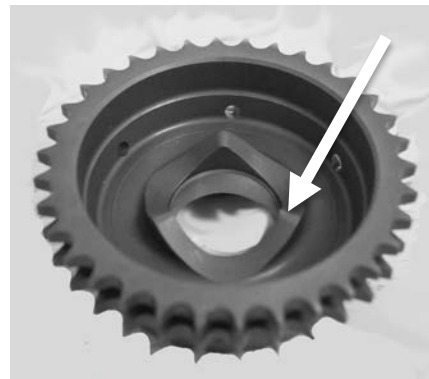


Figure 1, Cam Lobes

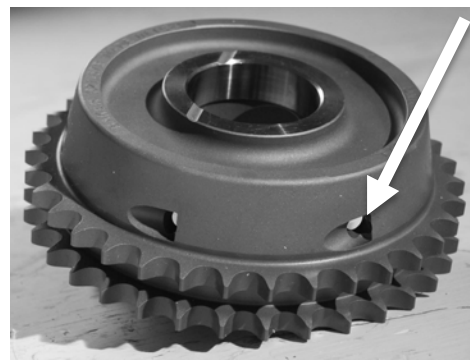


Figure 2, Oil Trowel



Figure 3, BAKER Attitude Adjuster

630B-67 COMPENSATOR KIT COMPONENTS

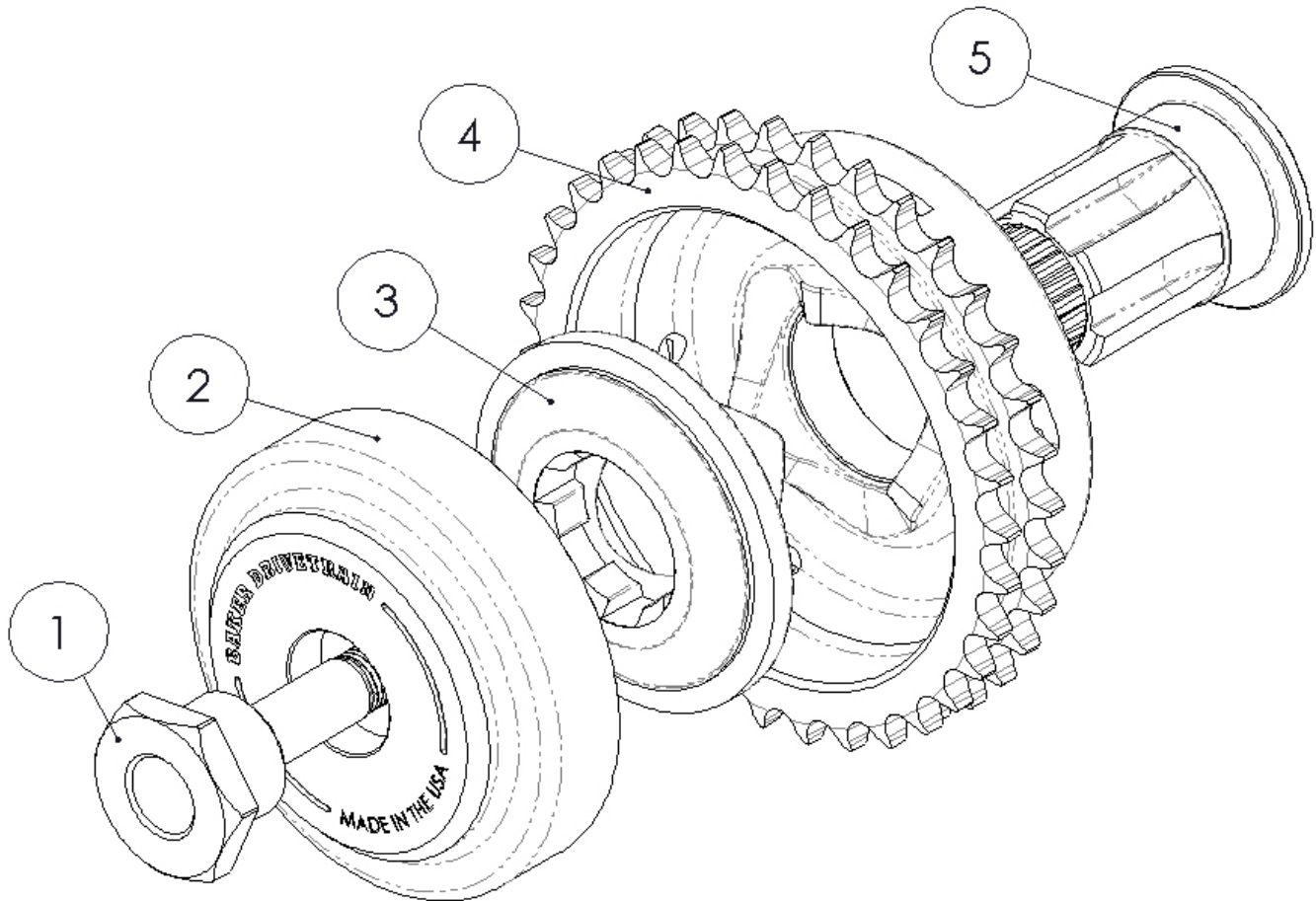


Figure 4, Detailed View

ITEM	QTY	P/N	DESCRIPTION
1	1	625-67A	9/16-12 Hardened Hex Bolt
2	1	624-67-A	Spring Cup Assembly
3	1	623-67-A	Cam Slider
4	1	621-67B	34 Tooth Comp Sprocket
5	1	622-67A	Motor Extension Shaft

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REMOVAL

Remove the outer primary and existing compensator sprocket per the Factory service manual but add the following steps to the job:

- 1) We highly recommend that the stock 9/16-12 compensator bolt be heated with MAP gas, prior to removal, to soften the red Loctite. Without the use of heat, the hardened red Loctite may break up into pieces and act like a very coarse abrasive and destroy the bolt threads as shown in figure 5.
- 2) After the stock compensator bolt is removed, clean out the 9/16-12 female sprocket shaft threads with a 9/16-12 bottoming tap or thread chaser.
- 3) Thoroughly purge the 9/16-12 threads with lacquer thinner or brake clean and blow all debris out of the blind hole with shop air.



REMEMBER SAFETY FIRST; WEAR EYE PROTECTION WHEN USING SHOP AIR

- 4) Inspect the inside of the outer primary for a plastic oil deflector or casted in oil deflector; figure 6 & 7. The plastic deflector needs to be removed for adequate clearance for the BAKER Compensator Sprocket Kit. If the deflector is casted into the inner primary; this area needs to be ground out using a small air die grinder or equivalent for proper clearance. Figure 8a shows the casted in deflector where it would hit the compensator sprocket. Figure 8b shows the area after it has been removed for clearance.

INSTALLATION

The 630B-67 installs, and replaces the stock factory compensator components, with no modifications or slight modifications required.

- 1) Apply some primary lubricant to the sprocket bore and cam lobes, cam slider cam lobes, and motor extension shaft journal prior to installation.
- 2) The five 630B-67 Compensator parts install in the same sequence as the pre-2007 compensator. Install the 622-67A Motor Extension Shaft first.
- 3) Install the 621-67B Sprocket. Make sure to generously lube the cam lobes and bore.
- 4) Install the 623-67-A Cam Slider followed by the 624-67-A Spring Cup.



CHECK THE PRIMARY CHAIN ALIGNMENT TO ENSURE CHAIN LIFE AND PREVENT COMPONENT FAILURE. CHAIN ALIGNMENT MUST BE WITHIN .030" (0.76MM) FOR PROPER ALIGNMENT.



Figure 5 – Destroyed Bolt Threads



Figure 6 – Oil Deflector To Be Removed

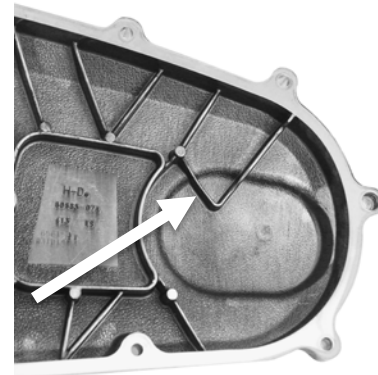


Figure 7 – Casted Oil Deflector To Be Removed



Figure 8a
Casted Area Needs
To Be Removed
For Proper Clearance

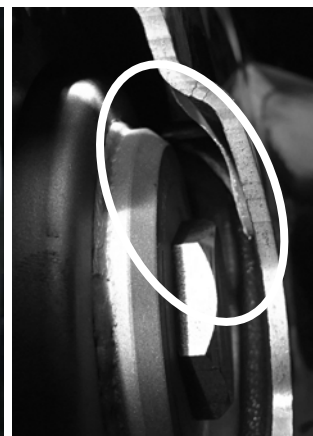


Figure 8b
Casted Area Removed
For Proper Clearance

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CHAIN ALIGNMENT:

- Install just the clutch and BAKER Compensator Sprocket; NO CHAIN. Install the clutch nut and hex bolt (pn 625-67A); snug at this time.
- Use some spacers to replicate the thickness of the outer primary and install the long 1/4-20 threaded bolt into the primary as shown in figure 9 and torque down per your factory service manual.
- Place a straightedge across the end of the sprockets. With a dial caliper, measure the distance from the straightedge to the gasket surface of the inner primary. When taking the measurement, measure on the front area of the primary for the compensator and rear area for the clutch. Record this measurement. Figure 10 & 11.
- Compare the two measurement taken.

The two measurements taken will be the spacer thickness needed or subtracted (if required). H-D® offers a wide range of motor sprocket spacers to accommodate your needs.

If you are within the .030" of chain alignment, remove the hex motor sprocket bolt and clutch nut. Remove the clutch and compensator; install the chain around both components and re-install.

- 5) Apply some red Loctite to the 625A-67 hex bolt and clutch nut. Torque clutch nut to factory specifications following your service manual, then torque PN 625-67A hex bolt to 100ft-lbs, then back off (loosen) a half turn then re-torque to 140ft-lbs for final torque. Note that the 625-67A bolt has a 1-1/2 hex head like pre-2007. A properly installed BAKER Compensator Sprocket looks like that shown in Figure 12.



Figure 9 - Spacers shown on long bolts



Figure 10 – Checking Comp Sprocket

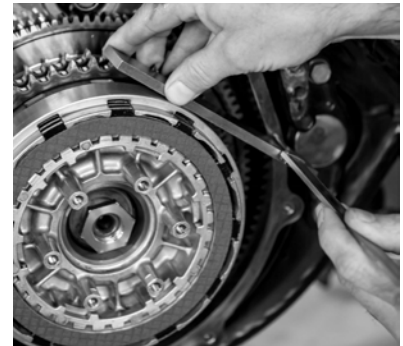


Figure 11 – Checking Clutch Sprocket

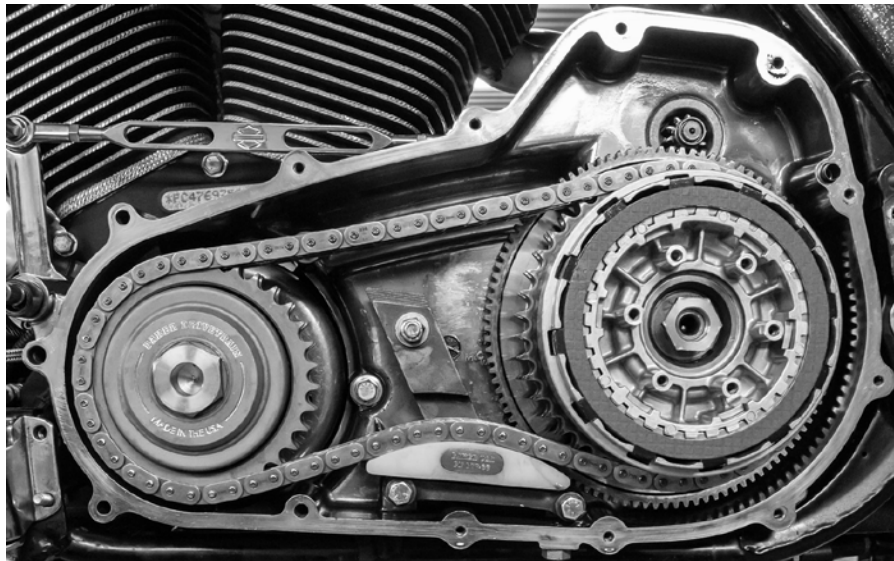


Figure 12 – Properly Installed BAKER Compensator Sprocket

PRIMARY CHAINCASE LUBRICANT

Fill the primary per the Factory Service Manual; 46 fl-oz (Touring models) or 40 fl-oz (Softail/Dyna).

BAKER recommends that Spectro Heavy Duty Primary Chaincase Oil or HD Formula+ Transmission and Chaincase Lubricant (PN 99851-05) be used.

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SPECIAL ORDERS

A minimum \$500 deposit is required with all special orders. Special orders include unique case finishes, unique side door requests (i.e.; wrinkle black door or no logo).

ALL OTHER ORDERS

Orders can be pre-paid using VISA, MasterCard or American Express.

Prices shown are F.O.B. Haslett, MI. BAKER™ provides free UPS ground shipping on all retail orders for complete transmissions or transmission kit. UPS air shipment is available upon request. Customer is responsible for air shipment premiums.

LIMITED WARRANTY

BAKER™ Inc. transmission accessories are guaranteed to the original purchaser to be free of manufacturing defects in materials and workmanship for a period of 2 years from the date of purchase or up to 24,000 miles - whichever is sooner.

If the product is found by BAKER™ to be defective, such products will, at the option of BAKER™, be replaced or repaired at cost to BAKER™.

In the event warranty service is required, the original purchaser must call or write BAKER™ immediately with the problem. If it is deemed necessary for BAKER™ to make an evaluation to determine whether the transmission assembly or transmission kit is defective, the entire transmission assembly, whether originally purchased as an assembly or kit, must be properly packaged and returned prepaid to BAKER™ with a copy of the original invoice of purchase.

If after an evaluation has been made by BAKER™ and a defect in materials and/or workmanship is found, BAKER™ will, at BAKER™ option, repair or replace the defective part of the assembly.

Warranty card must be returned within 45 days of purchase to be valid.

ADDITIONAL WARRANTY PROVISIONS

This limited warranty does not cover labor or other costs or expenses incidental to the repair and or replacement of BAKER™ products. This warranty does not apply if one or more of the following situations is judged by BAKER™ to be relevant: improper installation, accident, modification (including but not limited to use of unauthorized parts), racing, high performance application, mishandling, misapplication, neglect (including but not limited to improper maintenance), or improper repair.

BAKER™ shall not be liable for any consequential or incidental damages arising out of or in connection with a BAKER™ transmission assembly, transmission kit, swingarm, fender, component or part. Consequential damages shall include without limitation, loss of use, income or profit, or losses sustained as the result of injury (including death) to any person or loss of or damage to property.

BAKER™ transmissions, transmission kits, and Wide Tire Kits are designed exclusively for use in Harley-Davidson® motorcycles. BAKER™ shall have no warranty or liability obligation if a BAKER™ part is used in any other application.

If it is determined that a BAKER™ transmission assembly has been disassembled during the warranty period for any reason, this limited warranty will no longer apply.

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It is the sole responsibility of the user to determine the suitability of this product for his or her use, and the user shall assume all legal, personal injury risk and liability and all other as well as all other obligations, duties and risks associated therewith.

CUSTOMER SUPPORT

For any installation or service questions, please contact our BAKER technical department toll free: 1-517-339-3835.

